UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/841,862	04/25/2001	Robert A. Wiedeman	900.0006USU	7241

41339	7590	04/18/2005

KARAMBELAS & ASSOCIATES
655 DEEP VALLEY DRIVE, SUITE 303
ROLLING HILLS ESTATES, CA 90274

EXAMINER
RYMAN, DANIEL J

ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 04/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/841,862	WIEDEMAN ET AL.
	Examiner	**Art Unit**	
	Daniel J. Ryman	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>07 March 2005</u>.

2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-7 and 14-20</u> is/are pending in the application.

   4a) Of the above claim(s) <u>8-13 and 21-24</u> is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-7 and 14-20</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>07 March 2005</u> is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a) ☐ All b) ☐ Some * c) ☐ None of:

   1. ☐ Certified copies of the priority documents have been received.

   2. ☐ Certified copies of the priority documents have been received in Application No. _____.

   3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
      application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date <u>3/7/2005</u>.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments filed 3/7/2005 have been fully considered but they are not

persuasive. On page 8 of the Response, Applicant asserts that the restriction is improper because

the claims are drawn to only a single invention and do not require additional search on the part of

the Examiner. Examiner, respectfully, disagrees. Claims 1-7 and 14-20 are drawn to a method

and system for path set-up using QoS requirements. Claims 8-13 and 21-24 are drawn to a

method and system for bandwidth conservation in which the headers of packets are compressed.

The method and system of claims 1-7 and 14-20 are separately usable from the method and

system of claims 8-13 and 21-24 since a method and system for path set-up using QoS

requirements does not require a header compression scheme and vice versa.

2.   Further, contrary to Applicant's assertion, subclasses 352 and 477 would not both have to

be searched in order to perform a complete search for each set of claims. Therefore, searching

the different methods and systems presented in claims 1-20 places an additional burden on the

Examiner.

3.   For the above reasons, Examiner maintains the Restriction of the Invention embodied in

claims 1-7 and 14-20 and the Invention embodied in claims 8-13 and 21-24.

4.   On pages 10-11 of the Response, Applicant argues that Forslow does not disclose "a

mobile telecommunications system and method comprising at least one user terminal since what

is apparently described is applications running on a mobile station or on an external network

entity such as a [sic] Internet service provider specifying a quality of service." Examiner,

respectfully, submits that Applicant's assertion is contradictory since Applicant states that

Forslow does not disclose a user terminal and yet admits that Forslow discloses a mobile station.

If Applicant wishes to pursue this argument, Examiner requests that Applicant elaborate further

on why the mobile station and the user terminal are not equivalent.

5.   On pages 10-11, Applicant further asserts that "there is no indication either in the

drawing of [Forslow] or in the specification that said gateway is bidirectionally coupled to a data

communication network." Examiner, respectfully, disagrees. In order for the gateway to map

communications onto packet-switched network bearers, the gateway must be connected to the

packet-switched network. Further, it is implicit that the gateway is bi-directional since the

information flows handled by the gateway include types of flows that require bi-directional

communication, such a voice communication and surfing on the world-wide web (col. 5, lines

37-51.

6.   Additionally, on pages 10-11, Applicant asserts that Forslow does not disclose a

"controller responsive to applications for selecting individual ones of a plurality of quality of

service modes for servicing different application requirements." Against, Examiner, respectfully,

disagrees. Forslow discloses a mechanism for selecting individual ones of a plurality of quality

of service modes for servicing different application requirements since Forslow discloses that

each application requirement is assigned a quality of service mode. The mechanism for

performing this function is, as broadly defined, a "controller."

7.   On pages 11-12, Applicant asserts that Roccanova "is not concerned nor does it disclose

at least one user terminal or a gateway bidirectionally coupled to a data communications network

in combination with a controller responsive to applications for selecting individual ones of a

plurality of quality of service modes for servicing different application requirements." Examiner

agrees, which is why Examiner used Forslow to disclose these limitations.

8.   Applicant then contends that since Forslow does not disclose a satellite network and since

Roccanova does not disclose selecting QoS modes for servicing different application

requirements that the combination does not disclose the limitations of claim 1. Examiner,

respectfully, disagrees. One cannot show nonobviousness by attacking references individually

where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413,

208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir.

1986). Here, Forslow discloses that the invention can be used in a variety of mobile

telecommunication systems (col. 8, lines 60-63), where Examiner submits that satellite networks

are well known mobile telecommunication system. Roccanova teaches that it is important to

discriminate and route packets based on QoS requirements in satellite-based communication

systems (col. 1, lines 32-36). Thus, Roccanova suggests using a QoS system in combination with

a satellite-based communication system. Therefore the combination of Forslow and Roccanova

suggests the limitations of claims 1 and 14, as outlined in the Rejection.

9.   On page 12, with respect to claims 2 and 15, Applicant asserts that the cited prior art does

not teach "that the user terminal operates to communicate a request for a selected one of said

QoS modes at least to said gateway . . . since both disclosures are devoid of any user terminal

operation to communicate a request." Again, Examiner, respectfully, disagrees. Applicant admits

that Forslow discloses that the gateway maps flows according to QoS requirements. However, it

is the mobile terminal that contains the applications requiring particular QoS levels. Therefore, it

is inherent that the mobile terminal communicates the QoS requirements in some manner to the

gateway. Examiner equates this communication with the "request." Therefore, Examiner maintains the rejection of claims 2 and 15.

10.   On pages 12-13, with respect to claims 3 and 16, Applicant alleges that the cited prior art does not disclose that a higher QoS requirement results in higher costs for the consumer. Again, Examiner, respectfully, disagrees. Applicant asserts that companies only charge according to the amount transmitted rate; however, such a pricing scheme would resulting a company charging only a nominal fee for a user who tied up an entire circuit but transmitted only a small amount of data. In this scenario, the company would forego the profits it would earn by allowing multiple customers to utilize the same circuit. For this reason, it is well known in the art for a company to charge according to QoS requirements, such that a party who requires a high QoS, which is bandwidth inefficient, is charged more for the privilege of "wasting" bandwidth by maintaining the high QoS. Therefore, Examiner maintains the rejection of claims 3 and 16.

11.   On pages 13-14, with respect to claims 4 and 17, Applicant asserts that the cited prior art does not disclose a highest QoS mode, a medium QoS mode, a best available QoS mode, or a guaranteed data rate packet data service mode. Again, Examiner, respectfully, disagrees. As Applicant admits, Forslow discloses at least three classes of service: deterministic, statistical, and best effort. These classes equate to a highest QoS mode (deterministic), a medium QoS mode (statistical), a best available QoS mode (best effort). Applicant also admits that Forslow discloses transmitting information according to circuit-switching which equates to guaranteed data rate packet data service mode. Therefore, Examiner maintains the rejection of claims 4 and 17.

12.   On page 14, with respect to claims 5 and 18, Applicant alleges that that the cited prior art does not disclose a controller that "selects one of a circuit-switched or a packet switched mode of

operation." However, Applicant admits that Forslow discloses selecting between circuit-switching and packet-switching. Given that a mechanism is required to select between circuit and packet switching, Examiner has equated this mechanism with the "controller." Therefore, Examiner maintains the rejection of claims 5 and 18.

13.   On pages 14-17, with respect to claims 6, 7, 19, and 20, Applicant further asserts, in addition to aforementioned arguments, that the cited prior art does not disclose that "the processor is responsive at least to stored satellite ephemeris information for selecting a path through said satellite constellation." Again, Examiner, respectfully, disagrees. The satellite ephemeris data, as indicated by Wiedeman, discloses the location of the satellites. Since the fastest connection between two points on the earth through the satellite constellation will change depending on the location of the satellites, information pertaining to the location of the satellites is useful in determining how to route data through the constellation. Therefore, Examiner maintains the rejection of claims 6 and 19.

14.   Further, the location of the gateways is required in order to ensure that the path exits the satellite constellation at a point closest to the destination end-point on the ground. Therefore, Examiner maintains the rejection of claims 7 and 20.

15.   For the above reasons, Examiner maintains the rejection of claims 1-7 and 14-20.

Specification

16.   Examiner requests that applicant update the application information on page 1, lines 28-31, in order reflect any changes in the status of the application.

Claim Rejections - 35 USC § 103

17.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

18.   Claims 1-5 and 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Forslow (USPN 6,608,832) in view of Roccanova (USPN 6,522,658).

19.   Regarding claims 1 and 14, Forslow discloses a mobile telecommunications system and

method, comprising: at least one user terminal (col. 6, lines 48-54); and at least one gateway

bidirectionally coupled to a data communications network (col. 6, lines 60-64); said user

terminal comprising a controller responsive to applications for selecting individual ones of a

plurality of Quality of Service (QoS) modes for servicing different application requirements (col.

5, lines 41-60 and col. 6, lines 48-64).

Forslow does not expressly disclose that the mobile telecommunications system is mobile

satellite telecommunications system which includes at least one satellite in earth orbit; however,

Forslow does disclose that the invention can be used in a variety of mobile telecommunication

systems (col. 8, lines 60-63). Roccanova teaches that it is important to discriminate and route

packets based on QoS requirements in satellite-based communication systems since orbital

designs must accommodate the need for short round trip times required for voice data (col. 1,

lines 32-36). Thus, it would have been obvious to one of ordinary skill in the art at the time of

the invention to have the mobile telecommunications system be a mobile satellite

telecommunications system, which includes at least one satellite in earth orbit, since it is

important to discriminate and route packets based on QoS requirements in satellite-based

communication systems.

20.   Regarding claims 2 and 15, Forslow in view of Roccanova discloses that the user

terminal operates to communicate a request for a selected one of said QOS modes at least to said

gateway, and in response the system allocates resources to accommodate the requested QOS

mode (Forslow: col. 6, lines 3-15 and col. 6, lines 48-64). .

21.   Regarding claims 3 and 16, Forslow in view of Roccanova suggests that a user is billed a

greater amount for use of a QOS of higher quality (Forslow: col. 1, lines 41-62) where Forslow

discloses that higher QoS requirements mandate less efficient use of resources.

22.   Regarding claims 4 and 17, Forslow in view of Roccanova suggests that the QOS modes

comprise a Highest Quality of Service mode, a Medium Quality of Service mode, a Best

Available Quality of Service mode (Forslow: col. 5, lines 1-10), and a Guaranteed Data Rate

Packet Data Service mode (Forslow: col. 1, lines 48-51).

23.   Regarding claims 5 and 18, Forslow in view of Roccanova discloses that the controller

selects one of a circuit switched or a packet switched mode of operation (Forslow: col. 5, lines

41-51 and col. 6, lines 48-54).

24.   Claims 6, 7, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Forslow (USPN 6,608,832) in view of Roccanova (USPN 6,522,658) in further view of

Wiedeman et al. (USPN 5,655,005).

25.   Regarding claims 6 and 19, Forslow discloses a mobile telecommunications system and

method, comprising: at least one user terminal (col. 6, lines 48-54); at least one gateway

bidirectionally coupled to a data communications network (col. 6, lines 60-64); and a processor

responsive at least to stored information for selecting a path through said network to a

destination gateway for routing a communication to or from said data communication network

and said user terminal (col. 6, lines 7-10) where the resource reservation approach allows a

terminal to select a particular path to transmit the information, and for causing a description of

said selected path to be transmitted from said user terminal to at least one node of the network

(col. 6, lines 3-15 and col. 6, lines 48-64) where the terminal must inform the system of the

selected path in order for the system to use that path.

Forslow does not expressly disclose that that the mobile telecommunications system is

mobile satellite telecommunications system which includes a constellation of satellites in earth

orbit; however, Forslow does disclose that the invention can be used in a variety of mobile

telecommunication systems (col. 8, lines 60-63). Roccanova teaches that it is important to

discriminate and route packets based on QoS requirements in satellite-based communication

systems since orbital designs must accommodate the need for short round trip times required for

voice data (col. 1, lines 32-36) where the satellite communication system uses a constellation of

satellites (col. 1, lines 37-60). Thus, it would have been obvious to one of ordinary skill in the art

at the time of the invention to have the mobile telecommunications system be a mobile satellite

telecommunications system, which includes a constellation of satellites in earth orbit, since it is

important to discriminate and route packets based on QoS requirements in satellite-based

communication systems.

Forslow in view of Roccanova does not expressly disclose that the processor is

responsive at least to stored satellite ephemeris information for selecting a path through said

satellite constellation. Wiedeman teaches, in a satellite communication system, using satellite

ephemeris information in order to select a path through a satellite constellation when the

satellites move relative to the end user (col. 3, lines 12-26). Thus, it would have been obvious to

one of ordinary skill in the art at the time of the invention to have the processor be responsive at

least to stored satellite ephemeris information for selecting a path through said satellite

constellation in order to select a path through a satellite constellation when the satellites move

relative to the end user.

26.   Regarding claims 7 and 20, Forslow in view of Roccanova in further view of Wiedeman

suggests that the processor is further responsive to stored gateway location information for

selecting said path through said satellite constellation to said destination gateway (Forslow: col.

6, lines 3-15 and col. 6, lines 48-64 and Wiedeman: col. 3, lines 12-26) where the location of the

gateway must be known in order to complete a path through that gateway.

Conclusion

27.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (571)272-3152. The examiner can normally be reached on Mon.-Fri. 7:00-4:30 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Daniel J. Ryman
Examiner
Art Unit 2665

ALPUS H. HSU
PRIMARY EXAMINER